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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/787,172

02/27/2004

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EXAMINER

FINEMAN, LEE A

ART UNIT

PAPER NUMBER

2872

NOTIFICATION DATE

DELIVERY MODE

02/22/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/787,172	<b>Applicant(s)</b> UEHARA ET AL.	
	<b>Examiner</b> LEE FINEMAN	<b>Art Unit</b> 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2009 and 09 December 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 15, 16, 45 and 48-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 15, 16, 45 and 48-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10 November 2009 has been entered in which claims 1 and 49-51 were amended. Claims 1-5, 15-16, 45 and 48-51 are pending.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-5, 15-16, 45 and 48-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has amended all independent claims to include the limitation “wherein the adhesive layer/means for fixing affixes the optical unit directly on the image surface of the display panel such that a positional relationship between the specific region of the optical unit and the pixel displaying an image for the first view point of the display panel is maintained while permitting a difference in expansion or contraction between the optical unit

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and the display panel so as to permit displacement of the optical unit due to expansion and contraction of a material of the optical unit.” Applicant further states that the specification of the instant application discloses precise alignment of the display panel and the optical unit to which the examiner agrees. However, the specification lacks any details to the positional relationship of any specific regions of the optical unit and the display AFTER expansion or contraction as claimed. In fact, the paragraph spanning pages 27 and 28 of the specification discusses performing alignment expansion or contraction using markers 21 and 31. Therefore the specification fails to specifically identify maintaining a positional relationship between the specific region of the optical unit and the pixel displaying an image for the first view point of the display panel while permitting a difference in expansion or contraction between the optical unit and the display panel. The applicant is now relying on this limitation as criticalness to the patentability. As such, the examiner contends, absent specific support in the specification, that this subject matter was not considered within the metes and bounds of the invention as originally filed. The dependent claims inherit the deficiencies of the claim from which they depend.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Imai, US 5,930,037 in view of Takahashi et al., US 4,921,330 (henceforth Takahashi).

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Regarding claim 48, Imai discloses in fig. 3 an image display device (101) comprising: a display panel (102) which has a plurality of pixel sections (L, R) each of which includes at least a pixel displaying an image for the first viewpoint (L) and a pixel displaying an image for the second viewpoint (R), said pixel sections being provided periodically in one direction (fig. 3), and said display panel comprising an image surface on which the plurality of pixels are displayed (fig. 3); an optical unit (103) which refracts the light emitted from said pixels and emits the light in directions different from each other (fig. 3), and a means for fixing (column 5, lines 39-42) the optical unit (103) directly on the image surface of the display panel on which the plurality of pixels are displayed (fig. 3) which is provided on said display panel (102) to fix the optical unit and the display panel in line (column 5, lines 39-44), wherein the display panel (102) and optical unit (103) are aligned so that light emitted from the pixel displaying an image for the first view point is refracted and emitted by a specific region of the optical unit to arrive at said first view point. Imai discloses the claimed invention except for explicitly stating wherein the means for fixing the optical unit directly on the image surface of the display panel such that an unfixed part between the optical unit and the display panel may be deformed to absorb stress while a positional relationship between the specific region of the optical unit and the pixel displaying an image for the first view point of the display panel is maintained. Takahashi teaches in figs. 1 and 2, providing an adhesive layer/means for fixing (7) an optical unit (3) directly to a panel (2) such that a positional relationship between a specific region of the optical screen/optical sheet/lens film and the device is maintained while permitting a difference in expansion or contraction between the optical screen/optical sheet/lens film and panel (see column 4, line 60-column 6, line 15, in at least the same way as the instant invention since it is the same adhesive, i.e., the double-

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side tape) and such that an unfixed part (bottom of screen S) between the optical unit and the panel may be deformed to absorb stress (see column 4, line 60-column 6, line 15) while a positional relationship between the specific region of the optical unit and the display panel is maintained (in at least the same way as the instant invention since it is the same adhesive, i.e., the double-side tape). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the adhesive layer as taught by Takahashi between the optical unit and display panel of Imai to avoid undulation and swelling between the system elements (Takahashi, column 3, lines 39-42). It is noted that the when using the positional relationship as taught by Takahashi the adhesive layer/means would be provided on a part of an area enclosing an image display area of said display panel.

6. Claims 1-3, 15, 45 and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai, US 5,930,037 in view of Iwahara et al., JP60061738 (henceforth Iwahara).

Regarding claims 1 and 48-51, Imai discloses in fig. 3 an image display device (101) comprising: a display panel (102) which has a plurality of pixel sections (L, R) each of which includes at least a pixel displaying an image for the first viewpoint (L) and a pixel displaying an image for the second viewpoint (R), said pixel sections being provided periodically in one direction (fig. 3), and said display panel comprising an image surface on which the plurality of pixels are displayed (fig. 3); an optical unit/optical screen/optical sheet/lens film (103) which refracts the light emitted from said pixels and emits the light in directions different from each other (fig. 3), and an adhesive layer/means (column 5, lines 39-42) affixes the optical unit/optical screen/optical sheet/lens film (103) directly on the image surface of the display panel on which

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the plurality of pixels are displayed (fig. 3) which is provided on said display panel (103) to fix the optical unit/optical screen/optical sheet/lens film and the display panel in line (column 5, lines 39-44), wherein the display panel (102) and optical unit/optical screen/optical sheet/lens film (103) are aligned so that light emitted from the pixel displaying an image for the first view point is refracted and emitted by a specific region of the optical unit to arrive at said first view point. Imai discloses the claimed invention except for explicitly stating wherein the adhesive layer is provided on a part of an area enclosing an image display area of said display panel and provided to install the optical unit/optical screen/optical sheet/lens film on the display panel such that a positional relationship between a specific area of the optical unit/optical screen/optical sheet/lens film and the pixel displaying an image for the first view point of the display panel is maintained while permitting a difference in expansion or contraction between the optical unit/optical screen/optical sheet/lens film and the display panel so as to permit deflection of the optical unit due to expansion and contraction of a material of the optical unit. Iwahara teaches in figs. 4 and 5, providing an adhesive layer/means for fixing (4) an optical unit/optical screen/optical sheet/lens film (3) directly to a panel (2) such that a positional relationship between a specific region of the optical screen/optical sheet/lens film and the device is maintained while permitting a difference in expansion or contraction between the optical screen/optical sheet/lens film and panel (see abstract, in at least the same way as the instant invention since it is the same adhesive, i.e., the double-side tape). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the adhesive layer as taught by Iwahara between the optical screen/optical sheet/lens film and display panel of Imai to avoid undulation and swelling between the system elements. It is noted that the when using the

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positional relationship as taught by Iwahara the adhesive layer/means would be provided on a part of an area enclosing an image display area of said display panel.

Regarding claim 45, Imai in view of Iwahara further discloses wherein the adhesive layer is provided along at least two sides of the optical unit (see abstract).

7. Claims 2-3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai in view of Iwahara as applied to claim 1 above and further in view of Snaper, US 4,140,370.

Regarding claims 2-3 and 15, Imai in view of Iwahara further discloses wherein said optical unit is a lenticular lens (Imai, 103) having a plurality of semicylindrical lenses (Imai, fig. 3), longitudinal direction of which is perpendicular to said one direction (fig. 3), and said adhesive layer (7, Iwahara) is provided along the side extending in a longitudinal direction of said semicylindrical lens in said optical unit and along the side extending in a direction orthogonal to the longitudinal direction of said semicylindrical lens in said optical unit. Imai in view of Iwahara disclose the claimed invention except for a frame. Snaper teaches in fig. 14 use of a frame (68) surrounding an optical unit (66). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a frame as taught by Snaper to the optical unit of Imai in view of Iwahara to protect the edges of the unit.

8. Claims 4, 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai in view of Iwahara as applied to claim 1 above and further in view of Eichenlaub, US 5,410,345.

Imai in view of Iwahara as applied to claim 1 above discloses the claimed invention except wherein the optical unit is a fly-eye lens having a plurality of convex lenses in which a



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lens pitch in said one direction and the lens pitch in a direction perpendicular to said one direction are equal to each other. Eichenlaub teaches in fig. 13 that fly-eye lenses (178) with the lens pitch in said one direction and the lens pitch in a direction perpendicular to said one direction are equal to each other are a well known lens array in the stereoscopic art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a fly-eye lens with the lens pitch in said one direction and the lens pitch in a direction perpendicular to said one direction are equal to each other as taught by Eichenlaub in the system of Imai in view of Iwahara as they are commonly available and easy to obtain type of lens array. Therefore, said adhesive layer is provided both along the side orthogonal to the short side of said optical unit and along a short side of said optical unit.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-5, 15-16, 45 and 49-51 have been considered but are moot in view of the new ground(s) of rejection.

10. Applicant's arguments filed 10 November 2009 have been fully considered but they are not persuasive.

Regarding the 112 first rejection, applicant argues that the instant application at least implicitly discloses that "a positional relationship between the specific region of the optical unit and the pixel displaying an image for the first view point of the display device is maintained while permitting a difference in expansion or contraction." The examiner respectfully disagrees. The first cited passage only state that the bent panel permit a difference in expansion and

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contraction, not that the pixels positioning is maintained and the second cited passages state that by specific positioning of markers, the alignment between the lenticular lens and the liquid crystal display panel can be performed with higher accuracy. It does not state that this alignment is higher during expansion and contraction as stated by the applicant in the remarks (see page 10, paragraph 2). In fact, it is the examiner's belief that cited passage is intended to mean that "higher accuracy" is obtained when these two elements are fixed together in assembly, not during expansion and contraction.

Applicant further argues that Takahashi functions differently from the instant invention and therefore cannot have a positional relationship between the specific region of the optical unit and the pixel displaying an image for the first view point of the display device is maintained while permitting a difference in expansion or contraction as claimed. It is still the examiner's position that Takahashi and now Iwahara maintains a positional relationship in at least the same way as the instant invention since it is the same adhesive, i.e., the double-side tape, and in light of the 112 rejection.

The applicant argues that claim 48 recites similar features to amended claim 1, however, claim 48 was not amended. Therefore the rejection is maintained.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE FINEMAN whose telephone number is (571)272-2313. The examiner can normally be reached on Monday - Friday 8:00 - 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lee Fineman/  
Primary Examiner, Art Unit 2872  
16 February 2010